Sept. 25, 1934. K. K. KIRKHAM 1,974,616

ATHLETIC GLOVE OR MITT CONSTRUCTION

Filed Oct. 31, 1932

Fig. 1.

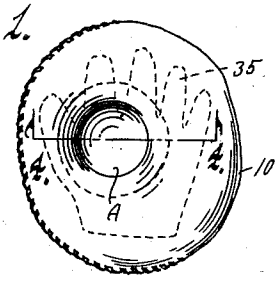


Fig. 2.

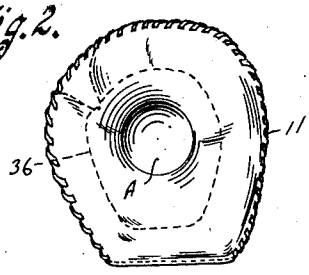


Fig. 3.

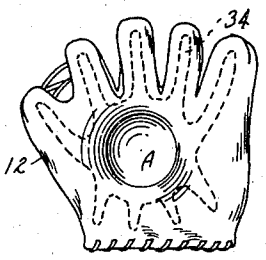


Fig. 4.

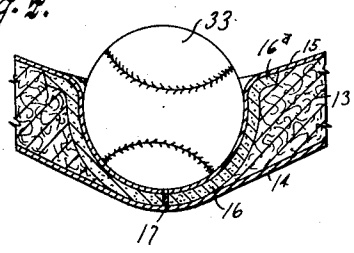


Fig. 5.

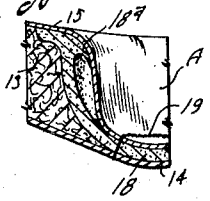


Fig. 6.

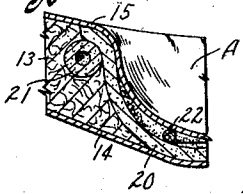


Fig. 7.

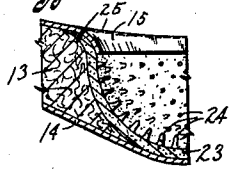


Fig. 8.

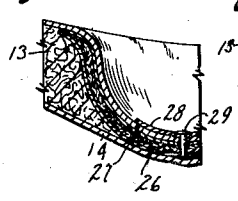


Fig. 9.

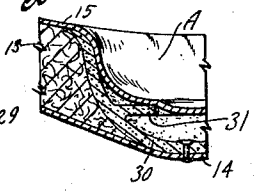


Fig. 10.

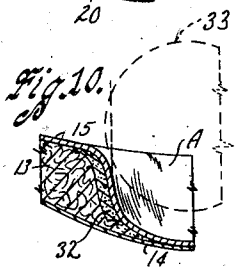


Fig. 11.

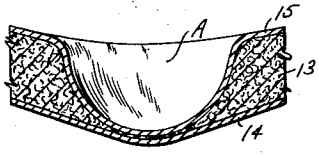


Fig. 12.

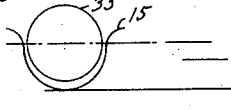
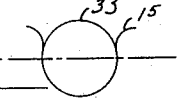


Fig. 13.



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UNITED STATES PATENT OFFICE

1,974,616

ATHLETIC GLOVE OR MITT CONSTRUCTION

Kenzie K. Kirkham, Ames, Iowa

Application October 31, 1932, Serial No. 640,408

5 Claims. (Cl. 2—19)

My present invention has to do with a construction for athletic gloves and mitts.

My invention is in some respects an improvement of that of my previous Patent No. 1,852,416, issued April 5, 1932 and in some respects is distinct therefrom.

It is the especial purpose of the present invention to provide an athletic glove or mitt having in the face a flexible cup-shaped pre-formed pocket for receiving the ball, the wall of the pocket being adapted to engage the ball to cushion its movement toward the bottom of the pocket.

It is also my purpose to provide a variety of details of construction, which may be advantageous in making different forms of mitts and gloves conforming to the general purpose.

Another purpose is to provide such a construction having the pocket as mentioned and having a face arranged without peripheral indentations, whereby the cost of construction may be substantially reduced.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my athletic glove or mitt construction, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a front elevation of a mitt, such as a catcher's mitt embodying my invention.

Figure 2 is a similar view of a first baseman's mitt.

Figure 3 is a similar view of a fielder's glove.

Figure 4 is a detail, sectional view taken on the line 4—4 of Figure 1, illustrating one form of construction.

Figures 5, 6, 7, 8, 9, 10 and 11 are sectional views taken on the same section line illustrating different forms of my invention; and

Figures 12 and 13 are diagrammatic views illustrating the manner in which the pocket structure works in certain cases.

In the accompanying drawing, I have used the reference numerals 10, 11 and 12 to indicate generally and respectively a catcher's mitt, a first baseman's mitt, and a fielder's glove construction.

In each of these there may be provided a ball receiving pocket. The construction of this ball receiving pocket may be varied in many respects and these various constructions may be applied to each of the kinds of mitts or gloves herein shown or to others.

Generally speaking, the glove or mitt has the packing indicated by the reference numeral 13, and the rear fabric cover, sometimes called a lining 14, and the front cover for the face of the glove indicated at 15, which may be of leather or any suitable material.

In the face of the mitt or glove is provided a cup-shaped pocket or recess for receiving the ball. I preferably pre-form this pocket, and it may be provided with cushioning means. For instance in the form shown in Figure 4, the pocket is formed by means of the cushioning members 16, which may be of ordinary rubber with the slightly out-turned flange 16*a* at the upper edge. The front cover 15, of course, fits down into the pocket formed by the member 16.

In the form shown in Figure 4, the pocket member 16 has an air hole 17 at the bottom.

Figure 5 is a slightly different form of pocket. A rubber cup-like member 18 is provided, which is substantially similar to the pocket member 16 with the omission of the hole 17, except that the pocket member 18 has near its upper inner part an in-turned flexible resilient flange 18*a*. As shown in Figure 5, the front cover 15, the pocket member 18 and the lining or rear cover 14 are sewed together at the bottom of the pocket by stitches 19.

Figure 6 is still another form of my device, having the pocket member 20, which may still be of rubber or may be of felt or of any material suitable for the purpose. I preferably put around the member 20, near its upper part and on the outside thereof a tubular, resilient, preferably continuous annular member 21. I have also shown in Figure 6 an annular resilient band or the like 22 resting on the bottom of the pocket member just under the covering 15. The form of device shown in Figure 6 may be made with both the annular member 21 and the cushioning ring 22 or with either of them.

Figure 7 illustrates still another form in which the pocket 23, of suitable material, for instance rubber, has a plurality of inwardly projecting points 24 to function as cushioning means. In the form of device shown in Figure 7, an opening is cut in the cover 15 and the edge of the cover around this opening is sewed to the upper edge of the pocket member 23, as indicated for instance at 25.

In Figure 8 is shown a slightly different form of my invention. There is provided a pocket member 26 similar in form to that already described, which may be of felt or other suitable material. The cover member 15 is sewed thereto as indicated by the stitches at 27. I may then place a round leather disc or the like 28 over the stitches

and put one rivet 29 through the leather disc 28, the cover 15 and the pocket member 26.

Figure 9 shows another form of the device. The pocket 30 is similar in general form to the pocket 16, except that near its bottom it has a substantially horizontal in-turned flange 31 of resilient nature.

In Figure 10 is illustrated another embodiment of my invention. In this case, there is provided a pocket formed in the face of the glove by cutting away the packing and fitting the appropriate portion of the cover 15 into the pocket and around the side wall of the pocket is placed a rubber or other flexible and resilient band 32, which is as though the bottom of the pocket 16 for instance had been cut away.

It will be noted that I have shown the pocket in Figure 10 as provided with a wall, the upper part of which is of slightly less diameter than the diameter of the ball 33 intended to be used in in it. The idea is that the ball will then spread the wall of the pocket under all circumstances and that the wall will be certain to have its cushioning effect.

In Figure 11, I have shown a very simple form of my structure intended for use in more inexpensive mitts and gloves. The pocket is formed by simply removing a part of the packing of the glove and fitting the cover member 15 into the cup-like recess thus formed.

A structure of the kind herein contemplated has a number of advantages. The cup shape contributes to the certainty of receiving and holding the ball 33. The impact of the ball as it travels into the cup is cushioned by the nature of the cup material and also by the fact that a cup of air in the bottom of the cup must be displaced.

In Figure 4, I have shown the air hole 17 in the bottom of the cup, and this may be used, if necessary, but I prefer to eliminate it as in the forms shown in the other figures. Even the form of cup shown in Figure 4 may be used without this hole. When no hole is used, and especially when the diameter of the wall of the cup is slightly less than that of the ball, it is obvious that as the ball travels toward the bottom of the cup, it tends to compress the air in the cup, so that that air serves as a cushion to the final entry of the ball. In practically all instances, the impact of the ball is not directly against the bottom of the cup, but against the side wall of the cup, so that it is received by the cup member and also by the packing.

On this account, there are some advantages in the forms of cup structures shown in Figures 5 and 6, which provide special cushioning means for the side wall of the cup.

In the structure shown in Figure 7, the members 24 serve as cushioning means. So likewise in the form shown in Figure 6, the member 22 furnishes additional cushioning means, and in the form illustrated in Figure 9, the flange 31 provides additional cushioning or shock absorbing means.

A glove of this kind not only serves to satisfactorily cushion the impact of the ball when it is caught, but in most of the forms here shown serves to hold the ball for an instant after it reaches the bottom of the pocket.

In some cases, the wall of the pocket may be of less diameter than the ball in use. In such cases, it is obvious that when the ball is once driven to the bottom of the pocket, there will be air pressure from the outside on it, which will for the instant help to hold it against accidentally being dropped. Any movement out of the pocket will tend to create a vacuum in the bottom of the pocket. This is also true wherever the diameter of the wall of the pocket and the resilience of the pocket are such that when the ball reaches the bottom of the pocket and pushes the bottom of the pocket, there is a tendency of contract the side of the pocket. I have endeavored to illustrate this in Figures 12 and 13. In Figure 12, the ball is entering the pocket, and the pocket wall is of greater diameter than the ball. However, when the ball reaches the bottom of the pocket and pushes the bottom out of its normal position, there is a tendency to contract the sides of the pocket until they grip the ball, so that they momentarily prevent outward movement of the ball. They also furnish a tight container, so that outward movement of the ball is prevented by suction of the vacuum at the bottom of the pocket. This, of course, is only for an instant, but is sufficient to help hold the ball against accidentally being dropped.

Another advantage arises from the use of this pocket construction in mitts. It is possible to omit the indentation by which the thumb portion is ordinarily formed and to cut the face covering of the glove without indentations in its periphery. Such structures are illustrated in Figures 1 and 2. This substantially reduces the cost in cutting and sewing of the mitts.

In Figure 3, I have indicated a slightly different form from those already mentioned. I have shown a cup member like the member 16 for instance in dotted lines with finger-like extensions indicated at 34 extending in various directions from the rim of the cup. These may extend in such direction as to protect the wrist and also to protect the fingers of the player.

It should perhaps be mentioned in this connection that while I have not attempted to show the finger stalls and the hand covering at the back of the glove or mitt, they are expected to be used in the ordinary way. I have shown them in dotted lines at 35 and 36 in Figures 1 and 2.

It will be seen from the foregoing that the pocket, which may be indicated generally by the reference character A, may be formed in a great variety of ways without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any of these structures which may be included within the spirit of my invention and the scope of the claims.

In all of the forms, the cover 15 may be built into or dipped into the cup, as in Figures 4–6 and 8–11 or formed with an opening as in Figure 7, or the preformed pocket member might be simply set into a pocket in the face of the glove or mitt.

It is noted that with the structure here suggested, the manufacturer may take advantage of the resistance of the wall of the pocket to the entrance of the ball, the forced spreading of the pocket, the air cushion resisting the ball, the contraction of the wall after the ball is in the pocket, and the vacuum for holding the ball.

I claim as my invention:

1. In a glove or mitt construction, a face with a flexible pocket having a bottom shaped like a portion of the surface of a sphere having a resilient annular portion spaced from its bottom of less diameter than that of such a sphere to engage an entering ball, and cushion its movement toward the bottom of the pocket.

2. In a glove or mitt construction, a face with a flexible cup-shaped pocket and a resilient annu-

lar element surrounding the pocket spaced from the bottom thereof.

3. In a glove or mitt construction, a face having a pre-formed flexible cup-shaped pocket for receiving a ball, the wall of the pocket being constricted near its opening to engage the ball to cushion its movement toward the bottom of the pocket, said pocket having near its bottom an annular inwardly projecting resilient flange.

4. In a glove or mitt construction, a face having a pre-formed flexible cup-shaped pocket for receiving a ball, the wall of the pocket being adapted to engage the ball to cushion its movement toward the bottom of the pocket, said pocket having near its bottom inwardly projecting resilient cushioning means.

5. In a glove or mitt construction, a face having a pre-formed flexible cup-shaped pocket for receiving a ball, the wall of the pocket being adapted to engage the ball to cushion its movement toward the bottom of the pocket, said pocket having near its bottom inwardly projecting resilient cushioning projections.

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